AgriProfit$

Newsletter for Alberta Cattlemen

Economics Unit

Editor's Corner

So far, we've talked about many of the things you discuss with your neighbors over coffee. "How much did it cost me per calf?" ... "What was my break even?" ... "Will that new piece of equipment pay for itself?"

In this issue, we're going to take our first step in search of the "silver bullet" ... those key management areas to focus on to improve the profitability of your cow/calf enterprise.

We start on the production side, looking to develop management performance measures regarding herd productivity. In the next issue, we'll move on to the dollars and cents side. In the end, we'll set a course on what to measure and how you can use your "new" management information to improve your bottom line.

Darren Chase has include his usual "Market Watch" and in the *"So What ...?"* column, Jeff Millang touches on an approach you can use, based on the strength of your own business analysis information, to determine what you can pay for a

Measuring "Management Performance" in Your Cow/Calf Operation - Part I

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In past issues, we've covered a broad range of topics, including setting objectives, marketing, benchmarking and budgeting. The one item we've keyed in on is that to be profitable in the cow/calf business, it is essential to focus on being a low cost producer, measured as the total production cost per lb. of calf weaned.

Creating Management Information

In the previous issues' ***So What*** column, we reflected on Harlan Hughes' thoughts on the relationship he's observed in his IRM program participants regarding management information systems and unit production costs. He found that cow/calf producers that create and use production and economic "management information" tend to have lower unit production costs.

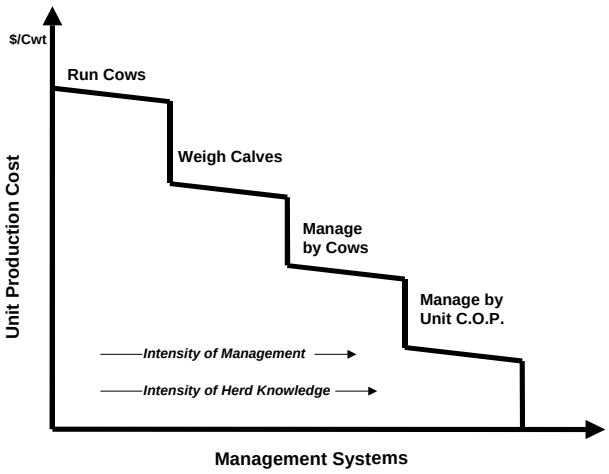
A message should be clear from Harlan's chart. The transition to increased use of management information is a gradual process. If you try to progress too fast, you can become overwhelmed with information.You wont be able to differentiate between what is important and what is not.

Furthermore, many of the performance criteria we will address are supported by a reasonable set of production and financial records, along with a business analysis of your cow herd. Once again, start slowly, using the information you have on hand, building to the ability to:

- determine each cows productivity,
- compare each cow's performance relative to the herd, and then
- assign a unit production cost for each cow.

As you progress down these steps, you will be making better, profit-oriented decisions, plus you will also get a sense for the information you need and its value to you.

Management Systems & Associated Cost of Production Plateaus



What Do We Measure?

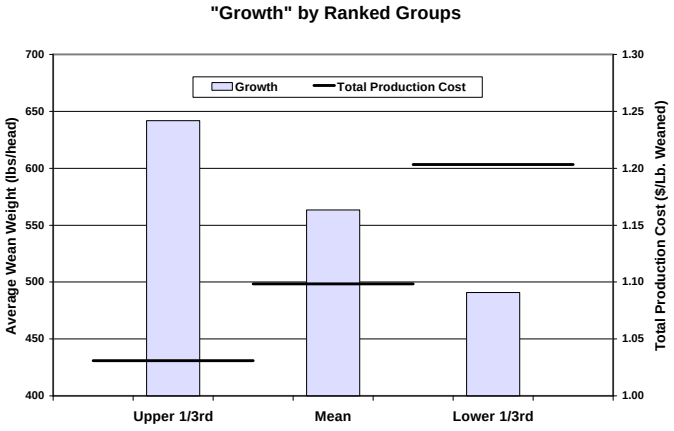
In this issue, we'll address the productivity side of cow/calf operations. The GOLD indicators will be used as examples of a few of the measures we can use to monitor production performance. Each of these will be put into context with their relationship to unit production costs. The goal is to develop a path to the second last step in Harlan's chart, "Manage by Cows".

The AgriProfit$ research data base was visited to develop performance and costing profiles of Alberta and Saskatchewan cow/calf operations (1999). For each of the GOLD criteria, the data was sorted into upper and lower 1/3rds to complement the means. For each of those groupings, the average total cost of production, per lb. of calf weaned, was computed.

As you will see when we look at the results for each indicator, there are some things we expected, and perhaps some things we didn't. We'll come back to how to use these together as part of a management information system.

Growth

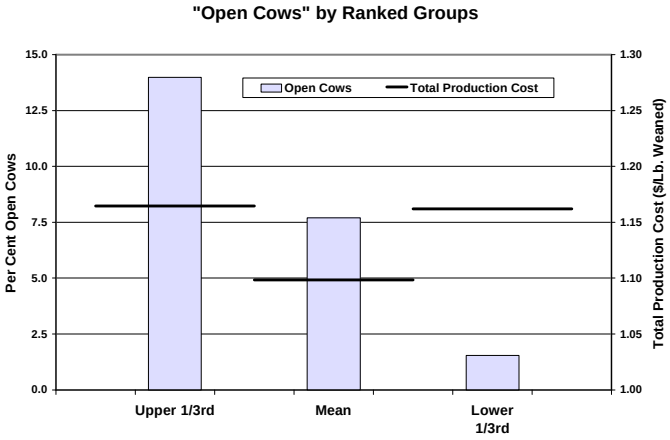
The average wean weight for the upper 1/3rd group was 642 lbs. compared to 491 lbs. for the lower group and an overall mean of 564 lbs. per calf. Costs per lb. of calf weaned were $1.031, $1.203 and $1.099, respectively.



We likely expected this result, right? It follows that if the average calf weight is higher, the unit cost should decline, right? Let's not jump to that conclusion quite yet.

Open Cows

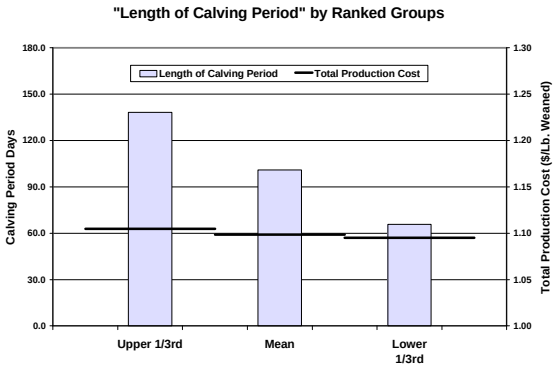
The upper 1/3rd group averaged 14% open cows, the lower 1/3rd averaged 1.5% and the overall mean was 7.7%. Unit production costs for each were $1.165, $1.162 and $1.099 per lb. of calf weaned, respectively.



The high open cow rate group makes sense. Dollars are invested in taking cows through the year, with the expectations of yielding a calf. When this doesn't happen, costs per lb. weaned rise. However, the unit costs for the low open cow rate group were almost identical to the upper group. There are a host of reasons that could drive this result. The underlying messages seems to be that a reasonable balance in measures to improve breeding efficiency and employing "crisp" culling criteria regarding "opens" tends to pay off.

Length of Calving Period

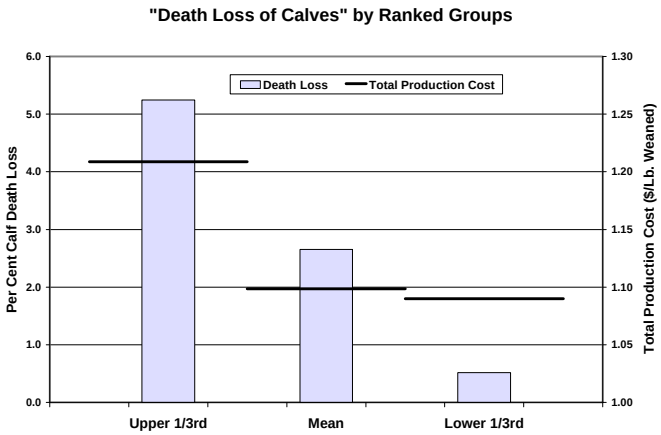
There was a 72 day difference in the average calving period for the upper and lower groups, with a mean length of 101 days. Costs between these groups varied minimally, with the upper group at $1.105, the mean at $1.099 and the lower 1/3rd at $1.095 per lb. of calf weaned.



Did we expect a major difference in unit costs? When you think about it, perhaps not. Gains in feeding cost are likely related to shifting the timing of the calving season, not necessarily the length of the season. As well, the driving force behind tightening the calving span was to get more uniform calves ... a revenue-based intention that appears to have little direct affect on unit costs.

Death Loss of Calves

Calf death losses ranged from 5.2% for the upper group, to an overall mean of 2.7%, and 0.5% for the lower group. Unit cost averages varied by $0.20 per lb. of calf weaned, coming in at $1.209, $1.099 and $1.090, respectively.

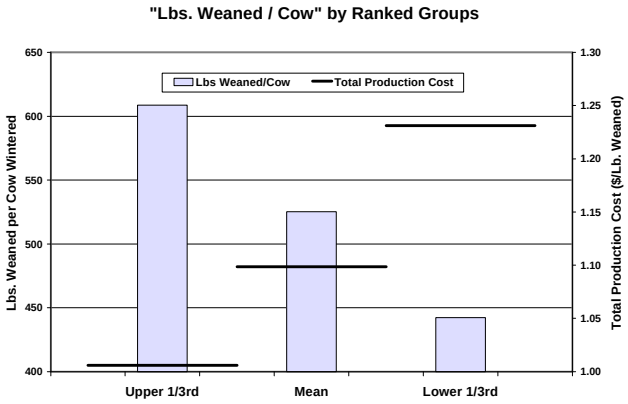


Once again, death losses result in fewer lbs. weaned and drive up the unit costs. From the costing differences, it would appear to pay to keep these losses in check but the rate at which savings occur diminishes as you try to drive it lower.

Where to from Here?

The purpose of our analysis is <u>not</u> to suggest that the GOLD indicators aren't useful measures. On the contrary, they can be effectively used to troubleshoot why you may, or may not, be having difficulty in achieving your ultimate goal ... lbs. of salable calves. Let's chart out "Lbs. Weaned per Cow" similar to how we did the GOLD indicators.

The results show why we should consider this factor as one of our "key management performance measures". The upper group achieved 609 lbs. weaned per cow, the mean was 525 lbs. and the lower group came in at 442 lbs. per cow. The unit cost difference was even more substantial with the three groups at $1.006, $1.099 and $1.231 per lb. of calf weaned respectively.



Multiplying the cost difference between the upper and lower groups ($0.225) by the average weaned of 525 lbs. works out to about $118 per cow!

A Balanced Approach

Is this $118 on the table for everyone? No! Does this mean we should strike out to maximize the lbs. weaned per cow? Definately not! Each operation has its own production and financial characteristics that limit what can be achieved.

A balanced approach, taking advantage of the strengths of your operation, will help you achieve some of this $118. Remember that when you select for a specific trait or criteria, you're applying "selection pressure" that can push back against profits.

For instance, you set out to increase your herd's average wean weight. Although you may end up with more lbs. of calf weaned, you also inherit the other things that come with it. These can include offsets to productivity (such as increased calving problems), larger cows (accompanied by higher feed costs), and so on. Perhaps another productivity performance measure, such as wean weight as a percent of mature cow weight, should be brought into your management information system to provide the balance you need.

Home Stretch

We've been good at measuring production performance, and to some extent, financial performance. However, we often come up short in linking the information we have at hand into an integrated "management information system" ... which can be directed to improving overall economic performance.

Analysis of the AgriProfit$ program data has shown the role of production indicators such as GOLD, and how you can incorporate these into broader performance measures, like lbs. weaned per cow. On the production side, the primary goal is to increase the "lbs. weaned" thereby reducing unit costs per lb. weaned.

In the next issue, we'll review some financial and costing criteria, looking for performance measures on the dollars and cents side. When this is all brought together, you'll have the basis for developing your own management information system, from monitoring criteria through overall performance measures. From there, you'll be armed with information you can use to make knowledgeable short and long term decisions ... leading to increased profitability and lower risk.

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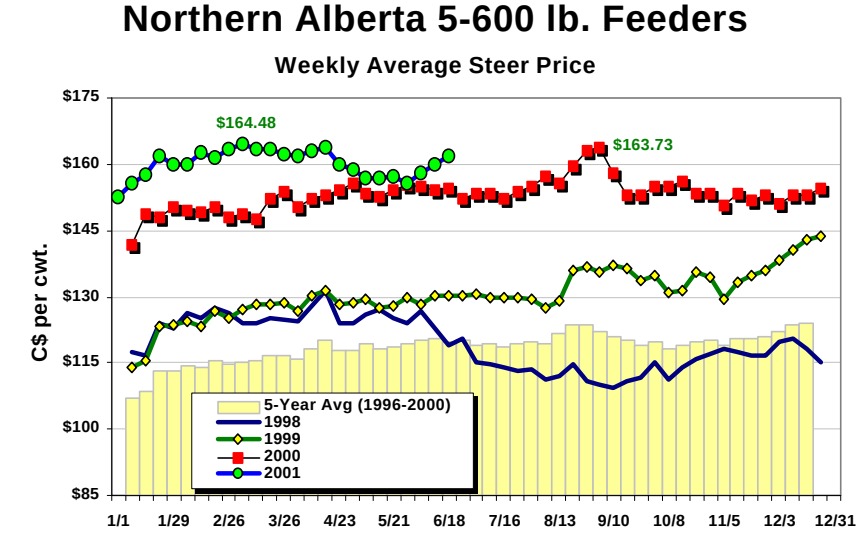
Market Watch



Source: Canfax; Economics & Competitiveness Division, AAFRD

With the strong feeder cattle movement we've seen through the first half of the year, an increasing percentage of the animals have been lightweight calves and cows drawn into feedyards by high prices and cheaper feeding costs (barley versus forage). Depending on which way the moisture situation goes, grazing and feedgrain issues are a big wildcard for seasonal gains on feeder cattle and calves through the summer months.

We'd like your comments and questions about the articles featured in this newsletter. Suggestions for future issues are also welcome. Please contact me at:

E-Mail: dale.kaliel@gov.ab.ca Phone: (780) 427-5390
or, by mail, at: 302, 7000-113 Street, Edmonton, Alberta T6H 5T6

AgriProfit$ If you'd like to learn more about and/or participate in our research program, please contact me at the above.

If you're interested in the CowProfit$ software, training or seminars, contact:
Ted Darling at (403) 948-8524 (ted.darling@gov.ab.ca), or Jeff Millang at (403) 556-4220 (jeff.millang@gov.ab.ca)

So What .. Do I Pay for Bred Heifers?

One of the uses for an AgriProfit$ or CowProfit$ report is as a baseline or starting point for assessing investment decisions. A relevant example is buying bred heifers (or even cows) for herd expansion.

Analyzing an "investment" involves three components -- budgeting, price forecasting, and time value of money (Net Present Value). Dr. Harlan Hughes has used this approach to assess bred heifer purchases in his work with North Dakota ranchers. In Alberta, we've modified his approach and added local details. I've set up an example designed to show what a heifer will earn over her lifetime, and the most that can be paid for her to break even. This analysis process fits any investment decision, from buying land to expanding the cowherd. It addresses the profitability of the decision, but not necessarily the cash flow or financing decisions around the investment.

The budgeting process starts with your CowProfit$ or AgriProfit$ reports. These provide the basis for your assumptions on unit costs and total project costs. Adjustments may be necessary to your historical costing, per cow or per lb. weaned, to account for any changes you think will happen.

Having built your budget framework, including costs and productivity, the next step of the investment analysis is price forecasting. This is perceived as the trickiest, and most uncertain portion of building the investment cash flow. However, market trend information is available from various sources (eg. AFRD, FAPRI) upon which we can create a reasonable price forecast and build a projected revenue stream. Incorporating the projected revenues into the cash flow budget yields a net cash income series.

But we can't stop there. We know a dollar tomorrow is not the same value as a dollar today. Each year's net income needs to be adjusted to today's dollars by discounting at an interest, or discount rate. Summing all of the discounted values yields the investment's net present value (NPV).

When picking an interest rate, or cost of capital, producers often choose the finance rate (loan rate). Technically we need to add on to this base rate to reflect the risk of the investment. I've chosen to ignore risk for the moment and use a standard rate of 7% for assessing a heifer investment in the following table. The cumulative NPV is the "payback", in today's dollars, of investing in a heifer giving successive calves. The investment generates a positive cash flow over the 7 years.

	2001	2002	2003	2004	2005	2006	2007
Selling Price / lb	1.54	1.56	1.58	1.48	1.38	1.32	1.28
Total Cost/ lb	1.23	1.30	1.36	1.43	1.50	1.58	1.65
Net Cash Income / lb	0.31	0.26	0.22	0.05	(0.12)	(0.26)	(0.37)
Net Cash Income / cow	167.86	144.90	120.25	27.81	(66.50)	(140.77)	(206.11)
Cumulative NPV	$156.88	$283.44	$381.60	$402.82	$355.40	$261.60	$133.24

The final step in this analysis is to account for the salvage value of the productive asset. If we estimate the salvage value of the heifer to be $850 after producing 7 successive calves, the cumulative NPV is equivalent to what we can afford to pay for her now and still break even. The updated table is below.

	2001	2002	2003	2004	2005	2006	2007
Selling Price / lb	1.54	1.56	1.58	1.48	1.38	1.32	1.28
Total Cost/ lb	1.23	1.30	1.36	1.43	1.50	1.58	1.65
Net Cash Income / lb	0.31	0.26	0.22	0.05	(0.12)	(0.26)	(0.37)
Net Cash Income / cow	167.86	144.90	120.25	27.81	(66.50)	(140.77)	643.89
Cumulative NPV	$156.88	$283.44	$381.60	$402.82	$355.40	$261.60	$662.58

Based on the budget (with our own costs), price projections and other assumptions, we can afford to pay $662 for a bred animal that will have a calf every year. If she slips a calf then the numbers get worse (we can only pay less).

The key here is that while these assumptions may seem simplistic, knowing and undertanding your cost and returns will provide you with important management information. Sound information, combined with better management tools leads to better decisions ... and improved profitability.

For more information on "How Much to Bid for Beef Cows" contact your district office and ask for Agdex 821-70 or its available online at:
http://www.agric.gov.ab.ca/agdex/800/2100070.html

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